

[54] STAIR CLIMBING EXERCISE APPARATUS

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[21] Appl. No.: 892,101

[22] Filed: Aug. 4, 1986

[51] Int. Cl.⁴ A63B 23/04

[52] U.S. Cl. 272/70; 272/73;
272/69; 272/129

[58] Field of Search 272/69, 70, 73, 96,
272/97, 129, 134; 128/25 R

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[57] ABSTRACT

An exercise apparatus that simulates stair-climbing for a user. The apparatus includes a frame having a base, and

a plate on the frame perpendicular to the base. A right pedal and a left pedal are on opposite sides of the plate. A drive system assembly on the plate has a right pedal sprocket, a left pedal sprocket, and a drive sprocket, wherein the right sprocket or left sprocket turn the drive sprocket in one direction only and the right and left sprockets are free to overrun in the opposite direction. The right pedal oscillates between an upper position at rest and a lower, rearward position under the weight of the user and drivingly engages the right pedal sprocket. The left pedal, operating independently of the right pedal, oscillates between an upper position at rest and a lower, rearward position under the weight of the user and drivingly engages the left pedal sprocket. A speed increasing transmission has an input and an output. A continuous chain drivingly engages the drive sprocket and the transmission input. A continuous belt engages the transmission output and an alternator which acts as a dynamic brake. A load resistor connected to the alternator is capable of absorbing the electrical energy output of the alternator. An alternator control and monitor is provided.

6 Claims, 7 Drawing Figures

